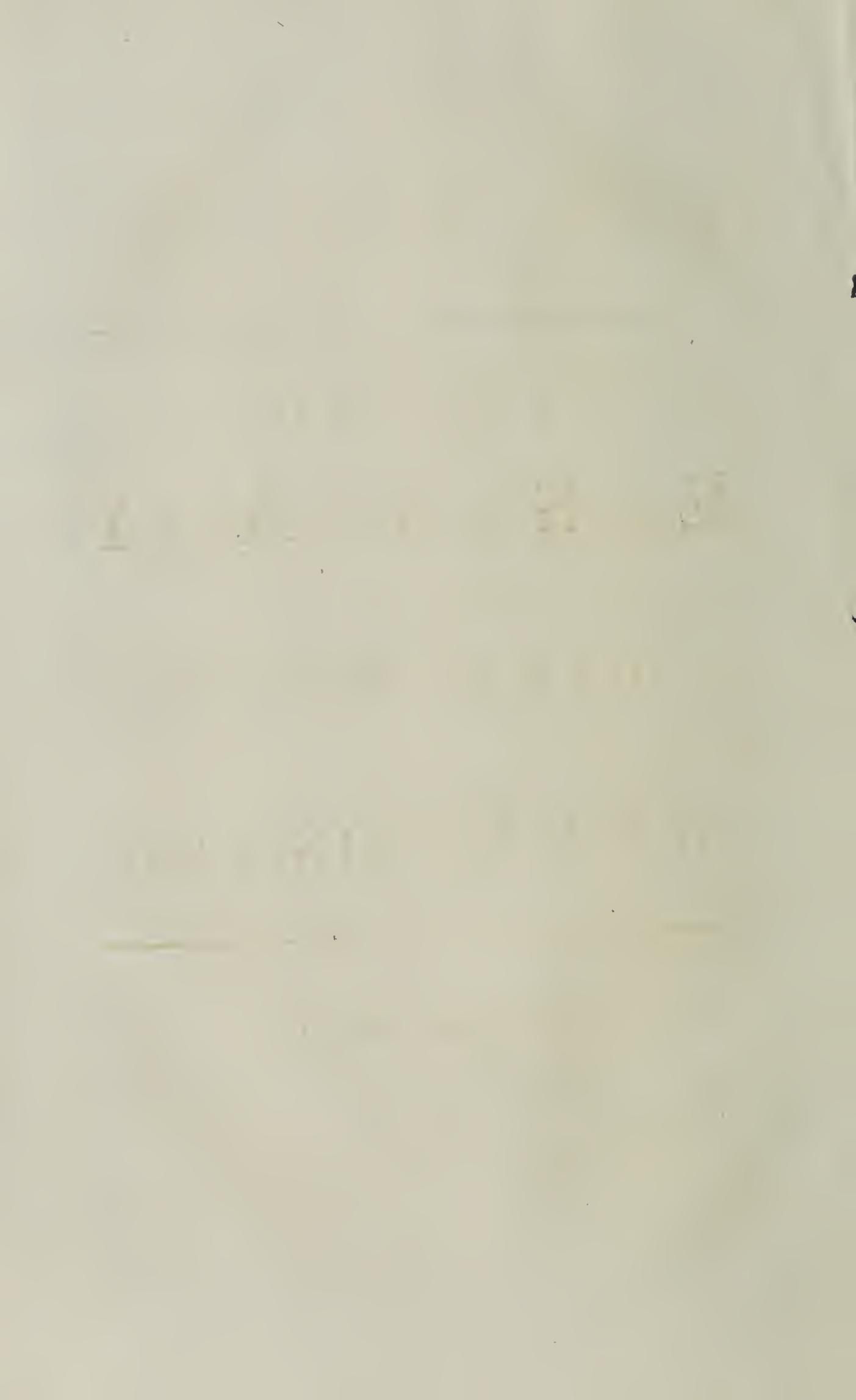

A PRACTICAL
ESSAY
ON THE
USE and ABUSE
OF
WARM BATHING, &c.

Price Two Shillings.



A PRACTICAL
ESSAY
ON THE
USE and ABUSE
OF
WARM BATHING
IN
GOUTY CASES.

By WILLIAM OLIVER, M. D. F. R. S.
Of BATH.

*Nec, quia desperes invicti membra Glyconis,
Nodosa corpus nolis prohibere chiragra.* HOR.

The SECOND EDITION,
With ADDITIONS.

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A N

E S S A Y

O N

WARM BATHING

I N

GOUTY CASES.

THE chief cause of false judgments, and different Opinions, amongst Mankind about facts is, that these are seldom truly represented, some circumstances being generally added or omitted, which, if known precisely, would have altered the Idea of them in the mind of the Person to whom they are related.

THE Fact I am about to consider in the following Sheets is—Whether warm Bathing be useful, or hurtful, in gouty Cases. This Fact, one should imagine, might easily have been determined by experience: Yet great Physicians are still of different Opinions about it.—How comes that difference still to subsist?—From the want of a just distinction between *proper* and *improper Bathing*. A Gouty Person bathes; is hurt by Bathing; the Fact is related to a physician at a distance, without any other circumstance; he concludes, from several such histories, that *Bathing* in gouty Cases is wrong. The Physician on the Spot saw this Person bathe; but he likewise observed, that he was in an unfit state to bathe; that he went into the Water without proper Preparation; that he staid in it much too long; and continued a Regimen of Diet, very improper for his circumstances of Health, or Method of Cure.—All that he

con-

concludes from the ill success of such a Person is—that *improper Bathing* is a dangerous Thing:—He by no means changes his Opinion of Bathing: He still holds *proper Bathing* in *gouty Cases* to be *right*, because he has found it to be so by experience. But these two Doctors must ever differ in their Opinions about the Question I have proposed, 'till He, who lives at a distance, becomes rightly informed of all the circumstances of the Fact, which fell within the observation of the other, who alone can judge whether the Patient bath'd properly or not. Nothing can tend more to enable both Physicians and Patients to judge rightly about Bathing, than a plain and faithful account of the proper and improper methods of using that powerful remedy; and of the usual consequences which attend the one and the other. A careful attention to the nature of these opposite methods, and a right distinction being made between them, would, in a great

measure, reconcile the different opinions, which arise merely from imperfect information. If what I am about to offer can render this Distinction more clear and precise than it has yet appear'd, it will give me great pleasure. But as I write not to instruct Physicians, but to inform Patients of what belongs to their own Interest ; that they may understand me more clearly, I thought it could not be amiss to premise a short and plain account of the Animal Oeconomy, as far as it relates to our present subject.

Most of the Diseases, which affect the Body, are owing to such an indisposition of the humours as renders them unfit to pass through their canals so freely, as that a total, and perfect circulation may be performed. When there is such an indisposition of the fluids, whether it is owing to the undue tone of the solids, or to any other cause,

Ob-

Obstructions, in some part or other of the Machine, will immediately be formed, and according to the bulk of the unnatural combinations of the particles of the fluids, a distemper will begin in a larger or lesser series of the canals. It would be endless to try to enumerate all the different diseases which are produced by obstructions. They are as various as the qualities and quantities of the obstructing Matter, and the texture, uses, and present state of the parts affected.

THIS Mechanism being allowed, let us try, from its laws, to form the plainest notion we can of the Gout, in its different stages ; let us see whether the use of bathing, in that distemper, has any foundation in Theory, as we assert it to have in practice, from happy experience.

WHEN the Heart of Man is first taught to move, He only, *who sees us before we are*, can tell. As soon as it does

does move, it begins to protrude the fluids thro' the canals, form'd to receive them ; first opening the largest, and gradually unfolding the least, in a continual decreasing series. By this method the Body is daily encreased in its bulk, and the sphere of circulation therein is enlarged. The Heart, growing in power, by its propelling force, continues thus to unfold the vessels, 'till their resistance becomes superior to its force, in its longitudinal direction. Then longitudinal growth ceases, but the sides of the Vessels still giving way, the animal continues to grow in breadth only. As different series of vessels are thus unfolded, various Phœnomena in the animal body appear. At seven months Teeth begin to push thro' the Gums ; at seven Years they drop off, shoved out of their places by their growing Successors ; at fourteen another great change happens, and at twenty-one the chins of the males begin to shew the signs of manhood. When the greatest

greatest number of vessels are open, and admit a free circulation of the fluids thro' them, *that* is the moment in which the animal body has attained its highest perfection in health, tho' strength and activity is afterwards encreased by some of the smallest Vessels being consolidated into Fibres, which appear to us to be quite impervious. It is probable that this Perfection is no more really stationary than the Sun is at the solstice ; it immediately declines ; every day bereaves us of some or other of the smallest Vessels, which were pervious the day before ; the sphere of circulation is gradually lessened ; our strength decays, however imperceptibly ; we feel ourselves loose our activity ; we grow stiff ; the circulation is brought into a very narrow compass ; the vessels become rigid, and bony ; the Heart, grown feeble, can no longer overcome their resistance, the natural death of the animal ensues.

*Multa ferunt anni venientes commoda secum,
Multæ recedentes adimunt.* HOR.

As we are daily gaining or losing some series of vessels or other, throughout our whole Lives, particular distempers generally appear at such, and such particular Ages ; and men are not ordinarily subject to some diseases after they have past the time of life at, or about which, they commonly shew themselves. Thus the Red-Gum is the disease of Infancy ; Consumptions of Youth ; Rheumatism of Manhood ; and the Gout of Old-Age. But a wrong formation of Parts ; hereditary taints ; manner of life, and a thousand accidents which our Bodies are daily subject to by their natural make, render all such Appearances uncertain. As an uncommon hot Seafon will bring forth the Flowers and Fruits of *May*, in *February*, or *March* ; or an unusual cold one keep them back 'till *June* ; so are the diseases of the body often produced prematurely, or de-

deferred to a stage of life to which they do not properly belong ; the youth shall be torn to pieces by the Gout, or the old man die of the Measles, or the Small-pox ; but, for the most part, the Gout does not appear 'till a few years after the Animal has attained its greatest bodily perfection, and the number of its vessels has begun to decrease.

WHAT the specific nature of the gouty matter is I do not know, and perhaps it may never be discovered. From its Effects we may guess that a truly regular fit of the Gout is produced by a subtle matter, which by the size of its parts, is capable of passing thro' all the larger vessels of the body without stopping, or giving much uneasiness, 'till it arrives in that very small series which surrounds the joints, where it is detained by its own bulk, and continually encreased by the accession of more matter of the same kind, 'till, by its

acid qualities, it pricks, tears, and rends the nervous membranes, and tendons, and thereby causes most tormenting pains to the person who labours under this Disease.

IN such a fit of the Gout, the pain excites, or heightens a fever, the means by which nature endeavours to expel the offending matter out of the body. This fever lasts 'till the gouty matter is in a great measure push'd through the vessels in which it stuck, and is either carried off by the perspiration of the afflicted Part, or being reabsorbed, may be carried back again into the larger vessels, and be discharg'd by sweat or urine, and what is not so evacuated may contribute its share to the next fit. Nature having thus obtained her end, the Fever subsides, and the poor sufferer is blessed with repose. A blessing, sweet indeed, but of short duration ! The gouty particles, by their mutual Attractions

tions and adhesions, form new moleculæ the next day, which arriving in the same series of vessels, act over the same tragedy the following night, and the next to that, and so on, 'till the habit has not gouty matter enough in it to supply another fit. Then the pain ceases ; the inflammation goes off ; the part swells ; the swelling decreases ; the Scarf-skin becomes a branny scurf ; strength gradually returns, and the patient finds himself more clear in his understanding, cheerful in his spirits, and active in his body, than he was before the fit ; as if all the juices, by being freed from this gouty matter, had been depurated and refined. Health then succeeds to make the poor creature amends for the torments he has endured, which are forgot as soon as Child-bed pains. Such a fit requires little assistance from physic. Patience, flannel, water-gruel, and clear whey, will be sufficient helps to nature to enable her to perfect her own work.

FROM the histories of this distemper, which we meet with in authors, we can't but believe that such regular fits are much less frequent than they were formerly. Children under puberty are often attacked ; Women are become very subject to the gout, and the fits in men seldom prove truly critical.

THAT hereditary gouts are more common, and appear earlier in life than formerly, may arise from the distemper itself having been spread wider, by the universal encrease of luxury among the rich, and of the horrid lust after gin amongst the poor. The valetudinary offspring of such debauch'd parents, arrive at the imperfections of fifty or sixty years of age, before they can really number twenty-one.

WHEN the appearance of this distemper is thus premature, it seldom keeps its original form ; its intervals are

are short, and its symptoms irregular, and the weak frame is soon destroyed by its violence.

WHEN the fits of the gout are not *critical*, they lay the foundation of numberless miseries. They fail of being so, when the force of the solids is naturally so weak, or rendered so, by an injudicious low diet, that they have not sufficient force to grind the gouty matter, by the help of the fever, fine enough for right expulsion thro' the small vessels; or from the habits being so overloaded with it, that the fever cannot separate it from the blood, and juices, in order to procure it a critical Discharge.

WHILE this gouty matter is carried about in the body, mixt with the other fluids, it often occasions Head-achs, Vertigos, Sicknes at Stomach, Loss of Appetite, Sour Belchings, Heart-burns, Flat-tusses

tusses, and wandering twitching pains in the limbs. When it is duly separated from the other humours, but deposited upon the joints in a greater quantity than can be critically discharged from them, it tears the small vessels to pieces; makes cavities wherein it may stagnate; by stagnating it thickens, and grows acrid; curdles the Mucus designed for lubricating the joints, and hardens it into chalky matter, which, as it encreases, destroys the motion of the joint, distends the skin, inflames, breaks thro' and discharges itself, either in a fluid, or solid form, generally in both.

THE joints are not the only parts in which this cretaceous matter will lodge; a finer sort of it will find its way into the tendons, which it will thicken, stiffen, and render unfit for muscular motion; whilst a grosser kind will form large flat cakes of chalk in the interstices of the muscles themselves.

Per-

Persons thus affected loose the use of their limbs, and have recourse to warm bathing for their recovery. To know whether they are right in this manner of proceeding, let us consider what may reasonably be expected, by persons under such circumstances, from the sensible Properties of our hot Baths.

As warm water they are allowed to soften, and relax rigid fibres, by external Application, and to dissolve saline and gelatinous concretions, by being admitted into the habit of the body. But the saline, sulphureous, and saponaceous particles manifestly contained in the Bath-Waters, must render these more penetrating, and more powerful solvents than common water.

THE rarefaction of the fluids, caused by the warmth of the Bath, is plainly a great deobstruent, especially when the too rigid sides of the vessels are rendered

ed soft and yielding to the distending force of the rarify'd humours. By this means the diameters of the Canals are enlarged, and the moleculæ, which were too large to pass through them in their contracted state, will be pushed on with ease by the Power of the general circulation, and consequently the obstructions, which were before formed by these moleculæ, will be removed. In how many diseases will this single effect of Warm-bathing be beneficial! Probably this rarefaction of the fluids, and relaxation of the solids, conjointly, may operate in several series of vessels, which no medicine is capable of entering, and consequently, may remove obstructions, formed in the finest capillaries, which would by degrees have produced chronical Distempers, the causes of which we could never have discovered, or if discovered, been able to have obviated their effects.

WHAT benefit bathers may receive by breathing an air, richly impregnated with the most active, and most volatile particles of the water, which are continually flying off from the surface of the bath, has not, as I know of, been yet duly considered. But when we recollect with how much greater power the water, drank immediately from the pump, before its volatile parts are all flown away, has, beyond that which is drank a few minutes after it has been in the glass, we can't but own that breathing those particles, for thirty or forty minutes, must have a considerable effect; and indeed, if the lungs are tender, and subject to catarrhs, and inflammations, a very bad one.

FROM these effects I think it reasonable to expect that our baths should do, what in fact we find they have done; that is, that they should remove the obstructing gouty matter from the parts

wherein it was lodged, by rendering it so fluid, as to be again carried on in the course of circulation. The morbid concretions thus dissolved and protruded into a larger series of vessels, the limb or joint will be freed from their oppression, and cannot but in whole, or in part, recover its natural use.

THE received maxim—

Tollere nodosam nescit Medicina podagram, greatly discourages all attempts of this kind: But we ought to consider, that *to relieve*, when we can't *totally cure distempers*, is a most desirable end. That this end has been obtained by many persons, who had almost lost the use of their limbs, by the severity of the gout, the many histories we meet with in authors do sufficiently testify. But I will trouble the reader only with two from Dr. *Pierce*, who flourished about the

the middle of the last century. As they are very remarkable, I give them in the Doctor's own words, which you will find in his *BATH MEMOIRS*, printed at *Bristol*, 1697. I think they cannot fail to give great consolation to all the gouty cripples who may read them in this treatise, or in the original. They seem to be a sovereign antidote against despair in the most deplorable cases, even in the latest stages of life.

It may be objected, says the good old man, *That most of those lame, enfeebled persons, brought by me for instances of recoveries here, were either young, and growing people, or at their ripe age, which might greatly assist this their remedy (though amongst the recited cases, you will find some, and those not a few, of a considerable age, and others much declining) therefore I shall give you one instance of a gentleman past fourscore and three; who after a most severe fit of the gout, which*

had run all over his body from joint to joint, 'till at length it settled upon the lower parts, and rendered them altogether useless, so that he could not so much as use crutches, unless a servant or two went by him.

It was my wife's father, Mr. David Tryme, of Wooky, in the county of Somerset, near Wells. He had, from between fifty and sixty, been subject to fits of the gout, but at great distances; sometimes a year or two, or three, between the fits; tho' he hunted, and now and then drank chearfully with his friends, (as the gentlemen of that country did then, and still do) and rode in all weathers. When he had a fit, his main care was to get ease as soon as he could, and in order to that, he had (or rather his excellent wife, who was more than half a physician and chyrurgeon to her poor neighbours) procured divers receipts for plaisters and ointments; with a probatum

batum est at the end of them. These he ordinarily used when the pains were violent, and if one answer'd not, went on to another. This did well enough when strength and vigour lasted, but at the age, I but now mention'd, 83. When that good wife of his had been long dead, and his, no worse, daughter (who supply'd her place in those charitable offices, as well as keeping her father's house) was married to me, that lived at sixteen miles distance; and a severe fit of the gout seiz'd him, first, at his toes and fingers, and he, impatient under the pain, causing those that were about him to apply what gave him most ease in the last fit; not considering whether it was repurcussing or no; this mov'd the distemper still upward, and they followed it with the same applications, 'till he fell into fainting fits; out of which he was, with difficulty, (and but for a while) got out, with strong waters. Then, and not 'till then, was I and his daughter, my wife sent for.

I quickly perceiv'd what error had been committed, and gave him brisk cordials, that moved, à centro ad circumferentiam, from the heart to the limbs: This threw out the gout so violently upon his hips, knees and feet, that he was, for some days, in most excessive torment, but free from faintings. He choose rather (as old as he was) to bear that, than to run the risque of dying, by applying again his plaisters. In a little time patience and posset-drink conquer'd the difficulty, for the pain ceased by degrees, but left so great a weakness that he could neither go nor stand, and such a stiffness at hips, knees and ancles, that he could not move a joint, to extend his legs, but was lifted up and down by main strength by his servants. This was in July, 1659, and he held thus all the following winter, about the latter of which, calling to see him, (as I used to do, riding that way to some country patients, to whom I was sent for) enquiring of him how he did: He answered

swered me that he was free from pain, and as well as he could hope to be ; I eat well, and I sleep well, but I am a cripple; what shall I do for that? I told him that I knew no remedy for him unless he would come to the Bath ; which it seems he had formerly been frightened from, for fear of bringing a fit of the gout upon him. I told him that if he would use such preparations as I would advise, and come at the season that I should appoint, and use the bath as I did direct, I would undertake it should not bring the gout upon him. He consented to it ; I sent to him in April following ; he came ; and after preparation, used the Queen's and King's-Bath ; but lifted in and out by two strong guides ; drank some (but not often or much) of the waters, (for he thought sack more agreeable to his age) after three weeks bathing, going one morning to see him in the bath, (which is a usual compliment we pay our patients here)

here) I found him walking between his two guides, without their help, and wishing he could go as well by land as he did by water: By and by he bid his guides stand off, saying, I could swim once; he set himself a swimming, and swam twice round the cross in the King's-Bath; so much had that little bathing loosened the stiff joints, as well as strengthened the weakened parts: He went on to recover; left his crutches behind him; hung them up for a trophy, and had no severe fit of the gout all his life after, which was five years or more, to the 88th year of his age, if not somewhat beyond. And had he not made too much haste to recover his eye-sight (which was almost lost by cataracts) he might probably have lived many years longer.

The next is the case of George Long, Esq; of Downside, in the parish of Shepton-Mallet, in the county of Somerset; three miles eastward of Wells. His great

great and wonderful recovery by the use of these waters, hath been long since made publick, I shall not therefore need to repeat a great deal of his long and painful sickness.

It is more than twenty years ago, that I was first physician to him, his lady and family; and its almost so long ago, that he was first assaulted with the gout, and I find in some of my papers, that more than sixteen years ago, I prescribed medicines for him, for sharpness of urine, stone, and gravel, as well as antiathritic remedies; for he seldom had a fit of the gout, without that of the stone also, and both frequently seized him. But in the year 88 and 89, and so forwards, for two or three years together, he was seldom free from great pains, which were diffused all over his body, from part to part, from joint to joint, where was wedged in, this calculus matter; that his finger became crooked, his right knee,

hips and back motionless. He was so contracted, that he could not be extended in his bed, (much less if the pain would have given leave) could he have been set upright. In short, he became (as we call it in this country) bed-rid.

He was lifted in a sheet from one side of the bed to the other, and from place to place, not easy without, nor well within: His thirst importunate, his appetite and stomach lost, his skin shrivelled, and discoloured, his face meagre, his hair grey, his flesh wasted, his muscles fallen all the body over; he could have thrown the calf of his leg over his shin bone. With all this he had a perpetual sharpness of urine, nay, all the juices in his body, had such a propensity to lapidescency, that his water being left (but a few days) in a crooked-bed urinal, it was crusted at the sides and top, as thick as a half crown; with a porous kind of stone, like that of a prunel. In this condition, he was

was with difficulty, brought to Bath, April, 91. He began with drinking the waters, hot in the morning from the pump, at meals cold, (for he drank not then, nor hath he done since, any malt drink.) In a week's time his thirst abated, and the sharpness of urine lessened, his stomach began to return. After a month's drinking, he bathed between whiles, which much eased his pains. He could in the Bath, suffer his legs to be distended a little. About the end of May, he returned home with this begun advantage, but carried the waters with him, and constantly sent for them. About the end of August, he came hither again, and stay'd six weeks or two months, drinking and bathing, as before. In the mean time he gathered some flesh and strength, and some small ability to go, though cripplishly. In November following, his grey hairs began to fall off, and new ones succeeded; he says more, that some of the grey ones returned again to

their colour, which way ever it was, by Candlemas, he had few or no grey hairs left, but a good head of soft brown hair, such as he had when he was about five or six and twenty, which grew so fast, that he cut more than an inch, every month, or five weeks. Even now (bating a little baldness upon the crown, for he is on the wrong side of fifty) it looks like a border of hair, which I have seen formerly worn, before whole heads were so much in use. To perfect this so well begun recovery, he took a house and lived here for the most part of the year 92, about which time his toe-nails which were hard, ragged and scaly, began to be thrust off by new and smooth ones; his arms and hands recovered strength, he had much freer motion of his joints; his muscles plump; he was daily more and more erect, and every bathing stretched him half an inch. He had now a fleshy, hale habit of body, a vigorous eye, and a ruddy, plump, youthful face,

face, (especially when he mixes sherry with his water, which he will sometimes do.)

In fine, he hath no fit of the gout to lay him up long together, nor the least touch of the stone, or sharpness of urine, since he left off malt-drink, and made these waters his constant Beverage. It is pity to leave out one material circumstance. An unbelieving knight that knew him well before, hearing of this miraculous recovery, came purposely to his house to examine the truth of it with his own eyes ; he soon might have seen it, but would not credit it 'till he had asked his lady, whether she found him grown young again ? She modestly. (and sharply enough) answer'd, I believe if I were dead, he would marry again.

Tho' all this is manifestly known to be true, yet little or nothing of it is believed by the advocates for other mineral waters, who

who envy, and would eclipse the reputation of these. Nay, their industrious reports have killed him several times, and many letters have been sent (some to me) to know the truth of it. Nay, I have been forced to shew him to some, (ladies especially) to convince them, to which (I thank him) he hath not been unwilling to consent.

To save the charge of more such post-letters, and to cure this incredulity, (as well as to serve his country) he was likely to have been sent up, to serve in parliament for this city.

He is able enough to bear the trouble of attending the business of the house, nor was there any reason to fear that the Bath-Waters would have lost their reputation, if he should have died there, though both these things were objected, in a letter from some that would have had another chosen. To evince the first, it was scarce

scarce two months before the time of election, that he rode from Bath to Oxford in a day; which is 48 computed miles, and above 50 measur'd ones, and but a few days before that, went from hence to his own house, (which is 12 or 14 miles) after 12 o'clock at night, went to bed for two or three hours, rose again, and dispatched a great deal of business before dinner.

And for the second, those gentlemen that (for their own ends) pretend so much kindness to, and concern for the reputation of these waters, may know, even by some of the foregoing and following observations, that the credit of them is not to determine with Mr. Long's life. For though they have wrought a very exemplary cure upon him, yet I hope they do not expect, that they should make him, or any body else immortal, or invulnerable, or not liable to other accidents, common to humanity. But weak

arguments seem strong to those that are willing they should persuade; at least when they are urged to such whom they think easy to be persuaded. In short, Mr. Long is alive, and very well, and not only keeps the strength he hath got, but improves it daily.

IT was the prudent advice of a wise man to his children, never to tell an improbable Story, tho' they knew it to be true, least their veracity or credulity should be suspected by their hearers.— This maxim would have discouraged me from inserting the foregoing history, if it had not been attended with all the marks of credibility, which a candid reader can require. Dr. *Pierce* was regularly bred at *Oxford*, and was a fellow of the college of physicians in *London*. He was a man of probity and piety, as appears from his writings; especially from the conclusion of the above quoted treatise. He published this case while

while Mr. *Long* was yet alive, and able to contradict any circumstance of it, which he knew to have been unfairly represented: Mr. *Long* permitted all curious persons to see him, and to examine the truth of the facts. After examination nobody ever pretended to doubt of the truth of the history, which Dr. *Pierce* had related in his book. From these considerations, I think we have all the evidence which history can afford us, that THIS HISTORY is a true one.

I SHALL now give two cases which have fallen within my own knowledge, since the first publication of this essay, in 1751, which, though much inferior to those of Dr. *Pierce*, may not be unacceptable to the reader, as they are recent facts.

THE following letter, from *Charles Edwin*, Esq; was dated March 5, 1753.

‘ I SHALL now endeavour to comply with your request, by giving you the most exact account I am able to recollect of the beginning and progress of my gout. The first fit I ever had, was in the year 1730, which was a very slight one: I then went into *Italy*, where I staid near seven years, during which time I had but one fit, and that very trifling. Soon after my return to *England* I had another, not violent, and which continu’d about a month or six weeks, but left a weakness in the joints. Since that time I have generally been attacked once in two years, but I have often escaped ’till the third winter, which was the case the last time, when it began the 14th of *January* in one of my feet, with more pain than in any of my former fits. Soon after it attacked the other foot, and ankle; afterwards one of my hands, and both my knees, so that I could not

' not bend them, or move my ancles,
 ' which obliged me to be carry'd from
 ' my bed to my chair. In this condi-
 ' tion I remained 'till I sat out for *Bath*,
 ' the 5th of *May*, 1752 ; I believe
 ' you may recollect to have seen me,
 ' when I arrived there in this melan-
 ' choly condition : But however I was
 ' so happy as to find myself recover
 ' much sooner than I had reason to
 ' expect, as I was able, after my third
 ' bathing, to walk in my room with
 ' the help of crutches, and conti-
 ' nu'd to gain strength daily, so that I
 ' could, before I left *Bath*, (which was
 ' the 9th of *November* following) walk
 ' to several parts of the town with a
 ' single cane. I bathed sixty - five
 ' times, and pumped my ancles thirty-
 ' eight, by which I received great
 ' benefit.'

CHARLES EDWIN.

It ought to be observed, that tho'

Mr. *Edwin* bathed so long, and pumped so often, yet during the whole course he never had one symptom of the humour, which had long stagnated in his legs and feet, being thrown upon any vital part ; neither has he had any violent fit of the gout since.

Tho' our waters are so serviceable in gouty lamenesses, yet as the gout is not a very common distemper amongst the poor, few of its victims offer themselves to our *General Hospital* for relief : But I think the benefit received by the person, whose case I am about to describe, from that extensive charity, deserves to be recorded.

PHILIP TUCKEY, of the parish of *St. Mary le Boe*, aged about fifty, was born of gouty parents, and improved his woful inheritance by a very free way of life. When he was about twenty-seven years old he was attacked by

by the disease of fifty, the gout shewing itself in his great toe. For some years he had fits at uncertain periods, and attended with variety of symptoms. About twelve years since he got a violent cold by painting (which was his profession) a new-built house, yet green in mortar, and sweating in lime: This accident threw the gout all over him, and the head, stomach, and bowels did not escape without their share. The pains continu'd to torment one part or other for five months, and then left him so weak and lame that he was a long while unable to stand upright, and could never after walk without crutches. The fits became more frequent, and less regular, and left him every time weaker and weaker.

HE was admitted into our hospital Nov. 3, 1752, under the care of the worthy Dr. *Woodford*, Reg. Prof. Med. *Oxon.* by whose kind permission I print this

this case. He was a square well-built man, of a ruddy complexion, tinged with a brown yellow, the common sign of an over-heated liver. His knees were almost immovable, the membranes which surround the joint being much thickned, and the tendons which draw the leg towards the thigh being hard, and contracted. His legs, ancles, and feet were much swollen, and oedematous. He had little appetite, and a bad digestion. His spirits were low, to which the despair of ever recovering the use of his limbs greatly contributed.

AFTER his first passages had been cleansed by warm purges, he began to drink the waters in moderate quantities. He soon found his appetite and digestion mend, and his spirits were relieved. Having persisted in this course some days, he was ordered to bathe three times a week: He had not been in the bath above three times before he perceived
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the stiffened tendons of the ham to become more supple, and to give way to the extension of his legs. He began to stand, and to move a few steps forward, supported by two of his fellow-patients. By a few more bathings he got to the use of his crutches, and by their assistance he walked up and down the ward with great joy. The swellings of his knees, legs, and feet gradually decreased, but without any symptom of the humours, which had so long been stagnating in these parts, being translated to his head, lungs, stomach, or bowels. He took a warm purge now and then, by way of caution, to keep the first passages clean, and the intestinal glands open, that they might freely discharge any gouty matter which might be returned into the general circulation by bathing. He went on thus successfully, gaining strength every day, so that in a month's time he could walk two miles with only a single stick, without

out being much tired, or feeling any ill consequences afterwards. In this happy condition he was discharged from the hospital about the latter end of the *December* following, and we have not heard of him since.

LET us now enquire whence the opinion, *that warm bathing is so dangerous in gouty cases*, does arise.

THEY who maintain it say, ‘ That when the gouty matter is dissolved, and brought again into the circulation, we cannot be sure what will become of it. We don’t know but it may be thrown upon the lungs, the liver, or the brain, and then this method of cure would be worse than the disease ; nay, there are not wanting histories to prove that, in fact, it has been so thrown upon the vital parts. It is dangerous to rouze a sleeping Lion.’

I SHOULD allow this way of reasoning to be just, if these evils did usually follow every manner of bathing: But here we must distinguish between *proper* and *improper* bathing. I shall endeavour therefore to shew, that these mischiefs arise from *improper bathing* only, and that they may be guarded against by prudent management.

SICK People believe that they come to the Bath for the use of the Bath-waters *only*. A bleeding, a vomit, or a purge as they think is a sufficient Preparation. They are so eager to begin with the waters, that they count even those few previous steps loss of time; and if any farther means are proposed, as proper to precede their entering upon a course of drinking the waters, and bathing, they grow quite impatient. They have taken physick enough at home, they say, and might as well have staid there, and taken it on, if

that was to remove their complaints ; they came hither for the use of the waters ; their affairs will not permit them to stay a great while, and therefore they are resolved to begin with the *only remedy* they came for, without farther delays.' Accordingly some of gross habits, and unsound Viscera ; stuffed with full meals, and inflamed by spirituous liquors ; others emaciated, weak, and dispirited, worn down by their distemper, and easily becoming hectical, by being over-heated, plunge into the Bath in a very improper condition. Then they are told, that the short stay they are ordered to make in the Bath can do them little good, and that the temperate part of it which they are advised to bathe in at first, has too little efficacy to affect their cure, at least within the short time they propose to spend in attaining it. They are then introduced to the boiling springs, and there detained 'till all the humours are rare-

rarefyed to such a degree, as to bring on faintness, sickness, vertigos, and palpitations of the heart. However, if these symptoms go off, the hopes of a speedy cure, and being taught to believe that these are the usual attendants on the first bathing, they venture to bathe again in the same manner, 'till the humours in general be dissolved, the gouty matter is set afloat in a greater quantity than nature can discharge ; a high burning Fever is raised, followed perhaps by a Pleurisy, a Peripneumony, inflammations of the Viscera, or even an Apoplexy ; and the patient may justly be said to have died of *improper bathing*.

Is it a wonder then that *such* cases, (the *circumstances* of which never reach the ears of those who hear of them at a distance) should prejudice persons against *bathing*, who labour under complaints, very like to those, in which its use had proved so fatal ? The short history, by
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that time it has left the walls of Bath, contains no more than the name of the distemper, the *bathing*, and the unhappy effects which followed. From such histories it is inferred, that *bathing* is dangerous to gouty constitutions; and the physicians, to whom they are transmitted, pronounce against it *rightly*. But the premises are wrong; for the case is imperfectly, and often, on other accounts, unfairly represented.

HAVING described some of the ill effects of *improper bathing*, and observed that the prejudice against *bathing* in general flows from Mens confounding *improper* with *proper bathing*, and (thro' imperfect histories transmitted to them) unjustly ascribing the ill consequences of the *former* to the *latter*. I now come to give the best advice I can, to my gouty friends, by which they may know how to use our baths with safety and benefit.

WHEN a person comes to the Bath for the recovery of his health, it appears but reasonable that he should commit himself to the care of some Gentleman, who has made it his business to acquire the knowledge of the right use of the hot waters, by a diligent observation of their effects on human bodies, diseased in a thousand different manners, which cannot be obtained, without natural sagacity, an improved judgment, and a long and patient attendance on the sick. When he has chosen such a Director, he should firmly resolve to follow the rules which *He* shall lay down for his conduct, otherwise he will continually be tormented with doubts, and scruples; and by hearkening to every pretender's opinion, he will have none of his own to act by securely. Many trifle away their whole time in a fruitless search of what they should do, instead of doing what they ought; 'till at last, finding they receive no benefit, or are worse than

than they were when they came, they condemn the Waters, and quit them in disgust.

THIS observation is applicable to all the sick who come hither for relief ; let their cases be what they will.

THE Physician, when he is called to visit the patient, should be acquainted with his age, temperament, and manner of living ; with the species of his distemper ; its first appearance, progress, and present state ; whether it be hereditary, or acquired ; its returns, duration, and manner of leaving him ; how his health is in the intervals, and what difference he finds between his former and latter fits.

ALL these circumstances being duly enquired into, and made known to him, he will set himself about the work of preparation, not slightly, and by prescribing things according to custom, but by such methods

methods as the particular case (with which he has now been made acquainted) shall indicate. The young, and the robust, who have had but few fits, will be relieved by what would destroy the aged, and infirm, who are almost worn out by the distemper. The sanguine, florid, and plethoric, will bear many, and large evacuations; while the nervous, thin, pale, and cold constitutions may be hurt by almost any evacuations at all. The general preparatory intentions must be to unload the body of all gross superfluous humours; to cool it by temperate diet, and to take off the viscosity of the fluids, as much as possible, before bathing is attempted. By these means there will be room in the vessels to bear the rarefaction of the fluids, which being attenuated by the hot water, will pass easily in the finest series of pipes, thro' which they may be driven by the accelerated circulation. Thus prepared, a gouty person may bathe

bathe safely, if his Viscera be sound, and
and untainted by any other distemper.

THE direction for the manner of bathing requires more skill than is commonly imagined. The physician's knowledge of all the particular circumstances of the patient's case, and constitution, can alone enable him to give it rightly. In general, the bather must go into the most moderate bath at first, and his stay in it must be short. He must go very leisurely from one degree of heat to another, and lengthen his stay in the water as his Physician shall direct, who will likewise appoint the times for repeating it from what alterations he observes bathing has produced in his patient's body.

IF the person who bathes is young ; or not very feeble, if old ; not too sanguine, nor full of gross humours ; has had but few fits, and those so critical as not

not to leave any stiffness in the joints, contractions, or gumminess of the tendons; or oedematous swellings of the legs, a common evacuation or two will sufficiently prepare him for going into the moderate bath twice a week, and staying in it half an hour at a time, having first drank the waters ten days. Nothing can tend more to the preservation of health than a short course of bathing after this manner. It washes off all the dead dry scarf-skin; opens and cleanses the milliary glands, and consequently promotes a free perspiration, by which the recrementa of the body are copioufly carry'd off. Besides, it softens the vessels, especially of those who are turn'd of fifty, and makes them capable of yielding to the protruding force of the circulation, which being accelerated by the heat of the bath, sweeps away all small concretions, which may stick to their sides, and would lay a foundation for future obstructions, if

not thus removed. Persons who have gone thro' this course, of drinking and bathing, will be extremely well prepared for Sea-bathing, which they may use during the summer months with great advantage, as it will brace and strengthen their solids, and give fresh vigour to their whole constitution.

THERE are several species of Gouts which differ widely from that regular one, which I have already described, and from one another, each requiring a particular treatment.

THAT which is commonly called a *deaf Gout* appears in the following shape.

AFTER a few twinges in the Toe, with a slight redness of the joint, just sufficient to determine the nature of the distemper, the whole foot, and the small of the leg swell, and grow oedematous ;

matous ; no more pain is felt ; the part is heavy, and cold, and continues in that state some weeks, from which when it begins to decline, and the tumour subsides, the other foot and leg are affected in the same manner. This sort generally attends persons who have an hereditary taint ; are born with weak fibres ; are of a full, bloated leucophlegmatic habit, which will not admit of a fever strong enough to grind and expel the *gouty matter* thro' the small series of vessels, which are the seat of inflammation, and accute pains, in more robust constitutions. But the little gouty matter that was protruded, as far as the weak circulation could carry it, unassisted by a fever, is immediately absorbed, and poisoning the lymph, curdles it, and renders it incapable of circulating freely in the dependent limbs, and therefore they are a long while before they recover their natural shape.

PERSONS thus affected have no occasion for total immersion. They must depend upon Bark, Steel, and Bitters, to attenuate their fluids, and to strengthen and invigorate their solids. But when the swelling is almost gone, putting their legs, for ten minutes, into a pail of the King's-Bath-Water, *not too hot*, will dissolve the remaining viscidities, and contribute to the restoration of a free circulation. When the parts are almost restored to their natural size, and only a weakness remains from their former distention, nothing will be of so much service as gentle friction, which should be repeated morning and evening, and continued at least half an hour every time, 'till the solid parts have recovered their tone. If this friction be made with flannels which have been just before saturated with the fumes of warm gums, and aromatic plants sprinkled on clear live coals, it will be more efficacious in restoring

storing the natural warmth of the part.

A THIRD sort of Gout is when the matter is more viscid, and yet less acrid than it is in the truly inflammatory kind. It gets into the tendons, but is not fine enough to pass through them. It lodges in them, and lies quiet ; thickens, hardens, contracts them, and renders them unfit for muscular motion ; but is not sharp enough to corrode them, or to curdle their juices into chalk. Persons crippled by this sort of Gout may safely use bathing, pumping, and rubbing, assisted perhaps with some penetrating, stimulating, and dissolving liniments. They generally receive great benefit from these means, and nothing is a more common, or a more pleasing sight, than their crutches, hung up in the Baths as grateful memorials.

I MIGHT likewise mention an irregular,

gular, flying, or nervous Gout, which is sometimes original, but oftner the consequence of a regular one becoming irregular. The matter in this sort is of a very volatile *phlogistic* nature, passing like lightning, or *electrical* fire, through the whole body, causing darting pains in every part, where it meets with any obstruction, exciting convulsive twitchings, and severe cramps, especially when the person is falling asleep; sometimes fixing for a very short time in the joints, with redness, inflammation, and acute pain; but perhaps after a few minutes, the joint grows pale and easy, to the great mortification of the patient, who wants it to fix, and produce a critical fit, as by that alone he has hopes of casting out this *subfultory Demon* which so cruelly torments him. By Degrees the spirits appear to be tainted; they grow inert, languid, and vapid; the man becomes hypochondriacal; the appetite fails; digestion is imperfect; flatusses

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prevail ; the flesh wastes ; a nervous atrophy is threatened.

THE fair sex are so peculiarly subject to this species from the delicacy of their frame, that I should not scruple to call it the *Female Gout*.

UNDER these circumstances I think the *Cross-Bath* will afford great assistance, as it promotes perspiration, dilutes and sweetens all the humors, and possibly quenches the *phlogistic aura* by its soft waters passing through the *vasa inhalantia* into the circulation ; obviating that rigidity of the fibres which is gradually coming on, and preventing the scarf-skin from crusting over the mouths of the milliary glands.

PERHAPS it may not be foreign to our purpose, to relate the case of Mrs. *Reynol*, wife to the late Rev. Bishop of *London-Derry*. She was naturally of a very

very thin habit of body, and very subject to gouty-rheumatic complaints, for which she had long been under the care of my worthy friend Doctor *Bonython*, of *Bristol*, where she then lived, her Husband being Chancellor of that Church. She was about thirty years of age, when she came hither by the Doctor's advice, to try what our waters could do for her. When I saw her she was reduced to a mere skeleton, by most excruciating pains. She had been bled often and largely, yet her blood still continu'd to be extremely fizy. The muscles of her throat were at that Time so strongly affected that she could not swallow, or even breath, without the greatest difficulty. The scarf-skin was dry, hard, and drawn so tight over her whole body, that I thought nothing was so likely to make a revulsion from the throat, as the letting this parchment covering loose, by relaxing it in the warm Bath, and by that means giving

ing more room for the general circulation. I therefore ventur'd to put her into the *Queen's-Bath*; in which, as she was so very weak, I ordered her to stay a few minutes. But, soon after she got into the water, she felt her pains to be so much abated, and her throat to be so much relieved, that she begged to be permitted to stay longer in the Bath; and she continu'd in it near half an hour. Upon changing the flannel for a linnen shift, we perceived that the old dry scarf skin, thro' which probably not any perspirable matter had pass'd a great while, and which by its dryness, and consequent contraction, had so violently compressed the whole surface of the body, was cracked in many places. After a few more bathings, it peeled off from every part in large pieces, some of which were thicker than the true skin is in its natural state. By the removal of this strait bandage, the vessels recovered their natural diameters, the fluids pass'd

freely without tearing and rending their containing pipes, the body grew plumper, the skin soft and moist, and universal ease ensued.

BUT to return.

TEN or fifteen minutes, twice a week, will be long enough for such persons to stay in this Bath, in order to obtain the benefit proposed, without being heated or weaken'd by it. Used with this caution, its gentle warmth, and penetrating moisture, I say, will greatly assist the deobstruent, alterative, and nervous medicines, which may be proper in such cases with the waters.

WE come now to treat of another sort of patients, labouring under a very different state of the Gout from any yet mentioned, whose cases require a much nicer, and more cautious management. Those I mean who have long

long laboured under the distemper ; which by its frequent and violent attacks, has made havock of their constitutions ; depraving the appetite, weakening the digestion, tearing the small vessels, depositing a cretaceous matter in the joints, tendons and membranes ; impairing, or destroying, their action ; and rendering life itself a burthen to the miserable sufferers.

WHITHER shall these poor creatures fly for succour ? whither but to those waters, by which, under Providence, so many in like circumstances have been relieved !

THE stomachs of such persons are generally loaded with tough phlegm, bilious and acrid juices, which prevent appetite, rack them with wind, create heart-burns and loathings, and instead of refreshing sleep, occasion continued uneasiness, and restlessness. Vomits are by

some *altogether* condemned in gouty cases ; but, under these circumstances, I have always judged them to be absolutely necessary ; and have found them, by long experience, safe and efficacious, as many, to whom I might now appeal, can witness.

THE Right Hon. the Lord Viscount *Palmerston* being here while I was writing these sheets, was pleased to read them over, and to give me leave to relate his case, which was as follows :

ABOUT seventeen years ago, his lordship had the Gout in his Stomach, to a very violent degree. His Physicians in *London* used their utmost endeavours to remove it, but without success. They ordered him to the *Bath*, and, with much difficulty, he got hither, continuing extremely ill, during the whole journey. Being arrived here, he immediately committed himself to the care

care of one of the most eminent Physicians of the place. I was soon after called to a consultation with him. I found his Lordship under very sharp pains in the region of his stomach, attended with continual sickness and reachings, throwing up every thing he took down, and with it much viscid sour phlegm, and bilious matter. It appeared to me unreasonable to try any longer what hot cordial medicines would do, while, if they could be forced down the throat, they could not be retained in the stomach long enough to do any good. I therefore proposed a *Wine-Vomit*, but that was thought a dangerous practice, and was strenuously opposed. However, with much difficulty, I got over the objections, and his Lordship's life appearing to be in great danger without some immediate relief, a vomit was given. The success answer'd our wishes ; the pains were relieved, and the reachings ceased ; medicines staid in his

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stomach, and he passed the following night comfortably. This relief encouraged us to give him another vomit ; which cleared his stomach so effectually, that both food, and the little phyfick he had then occasion for, sat easy in it ; his appetite returned ; he drank the waters without interruption ; recovered his flesh and strength gradually ; and I have the pleasure to believe, that by these means, under the blessing of Providence, our country hath thus long enjoyed this truly noble and worthy gentleman.

THE manner in which I generally proceed in vomiting gouty patients, is as follows.

TAKE from one ounce to two ounces of the infusion of *Ipecacoanha* in Wine.

Two drachms of the tincture of *Sena*. Mix these for a draught.

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WHEN this Emetic begins to operate, it is to be work'd off with two parts of *Camomile-Flower Tea*, to one of *Old Mountain*, or *Red-Port Wine*. If the patient is us'd to drink too much Wine, I chuse he should promote the vomitings with that sort which he likes best, because it gives him an aversion to it for some days afterwards, and he is the more easily induced to submit to the restraint his physician ought to lay upon him, in the article of drinking.

THREE or four full pukes are sufficient. By this method they vomit easily, and the stomach is left so warm and comfortable that they sleep sound without any opiate, or cordial, and wake the next morning refreshed, and cheerful, sensible of more ease than they have felt for a long time before. After this vomit they seldom fail of having the remainder of the humors, which had been stirred up by the operation, carried off by the intestines. But

BUT I would not here be thought to suggest that vomits are to be given in all the attacks the Gout may make on the stomach. When the pains are violent, the reachings plainly spasmodic, and without any signs of a load of humors in the stomach, such irritations may be dangerous. But when nature appears to be making ineffectual efforts to get rid of a burthen by vomiting, I think we cannot relieve the patient but by assisting her endeavours.

IF spasmodic pains should affect the Stomach, or any part of the Intestines, after the operation of the vomit, two or three spoonfuls of *Tinctura Sacra Vinosa*, or the *Tinctura Senæ*, with twenty or thirty drops of *Sydenham's Liquid Laudanum*, will quickly and safely allay them.

PROPER evacuations of all kinds, suitable to the case, having been previously ad-

ministred, the next intention should be to strengthen the stomach and bowels, by drinking the *Bath* waters, ten days at least before bathing be attempted. They will cleanse the first passages; wash, comfort, and strengthen the solids; and entering into the blood, and mixing with the mass of juices, they will render them more fluid, and capable of passing through the small canals, tho' rarefied, and accelerated in their circulation by the warmth of the *Bath*, when they come to use it.

HERE again great judgment, and skilful experience, are required, rightly to distinguish from which fountain, and in what quantities, every particular patient ought to drink.

THOSE who have cold lax bowels, are subject to gouty colics, loosenesses, and flatusses, want of appetite, and morning reachings, should drink

of the King's Spring, beginning with a small quantity, taking it in bed, soon after they rise, or an hour after their breakfast, as they are found to agree best. The quantity must be encreased as the observation of their effects shall direct, for no general rule can be laid down concerning it. When the waters of this spring are drank in small quantities, they are very apt to cause costiveness, which must be removed by encreasing the quantity, or changing the water for that of the Hot-Bath, as it is commonly called, tho' not in reality hotter than the King's. But tho' this water sometimes proves opening, yet it often fails our expectations, and we are forced to have recourse to small doses of *Pil. Rufi*, *Tinctura Sacra*, or *Tinctura Senæ*, repeated as we find occasion. But when the sick person is by habit subject to costiveness, with dry rigid fibres, easily heated, and inclined to be feverish, we ought, after purging him

him gently with the cooler, softer, and milder cathartics joined with Soap, to recommend the Hot-Bath-Waters, and if they prove too heating, to have recourse to those of the Cross-Bath, which are much more cool, and opening, than the former, and may be drank with safety and benefit in many cases, in which either of the other springs would be hurtful.

THE lungs of some gouty persons are so tender, and so easily inflamed, that it would be hazardous for them to drink either of the waters immediately from the pump. If *they do drink them*, they ought to have them brought to their lodgings, and to let them stand six minutes, that their volatile and heating particles may fly off, and then, by putting one spoonful of Asses or Cow's milk into each glass, they will become safe and beneficial, especially those of the Cross-Bath.

I CANNOT forbear mentioning a very offensive custom of putting milk, and a variety of medicines, into the waters at the pump, which then become *mere vehicles*, their specific properties being destroyed by the mixture. I therefore advise my patients to take their physick at their lodgings, and then come and drink their waters pure at the spring, by which they themselves will have the full benefit of both, without disturbing others by disagreeable sights, and ungrateful smells.

THE relief, which men crippled by the Gout expect from bathing, is, that the waters will gradually dissolve the gouty matter, wherever lodged ; and that by softening, and relaxing the vessels, they will procure it to be thrown off by perspiration or sweat, or to be absorbed, and returned into the circulation, and by that to be driven out of the body with the larger secretions.

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Great care must therefore be taken, that this *matter* be not too suddenly dissolved in large quantities, by too long a stay in the bath, or too intense a degree of heat. Whether the last bathing has had this ill effect, the patient will feel, and the Physician will discover by the state in which he finds his patient the evening of the day he bathes. If he is feverish, he may be sure that some of the *gouty matter* is dissolved and got into the blood, and that nature is labouring to get rid of it. He must then wait 'till she has performed this necessary work, which will probably be in thirty or forty hours, by a turbid urine, or fœtid sweat. Should this enquiry be neglected, and the patient suffered to bathe again, and by that means more gouty matter should be forced into the blood, before what is already there be expelled, a high and dangerous fever may chance to follow ; for the quantity of this matter may be so abundant, that nature shall

shall not be able to discharge it by the common emunctories, and then there is hazard of its being deposited upon any of the Viscera, the Lungs, or the Brain, and so of producing fatal effects.

WHEN this fever is first discovered, patience, abstinence from bathing, and from every kind of meat and drink which is inflaming ; the use of Wine-Whey, or Bath-Water Whey, drank warm, and plentifully, will be all the assistance nature will generally want to carry it off ; for by these means the gouty matter will be disposed to pass out of the body by sweat, or urine. But if the fever rises so high, by the repetition of bathing while it still subsists, that it is not to be conquered by these gentle means, bleeding will then become necessary, and perhaps once opening a vein will not be sufficient. If the person is costive, an emollient Clyster must empty the bowels, and a little spirit

rit of Nitre may be added to his wheys. But if the fever still continues obstinate, the best end to be expected of it is a critical fit of the Gout, which will effectually prevent all thoughts of bathing again, 'till that has had its course.

BUT if the greatest part of the gouty matter, brought into the blood by the last bathing, be discharged again by the common emunctories, and the Physician observes no fever, pain in the head, or restlessness to remain, then, and not 'till then, he may permit his patient to bathe again, and to repeat his bathings at proper intervals, increas-
ing the degree of heat, and lengthening his stay in the water, tho' very cau-
tiously, 'till he perceives that there is a greater quantity of fresh gouty matter brought into the blood than can be se-
parated from it without any fever. When he perceives that to be the case, I need not repeat how warily he is to
pro-

proceed, let the infirm person be ever so impatient. But if the patient, thro' ignorance, obstinacy, or prejudice, will hurry on in bathing faster than he can do it with safety, the Physician, after honestly declaring to him the danger of such conduct, ought to leave him to that management, for which he cannot be answerable.

FROM what has been said, I think it plain that rubbing, and pumping the parts affected, ought not to be rashly attempted in this kind of gout; for by these powerful dissolvers and dislodgers of gouty matter, a greater quantity of it may at once be thrown into the blood than would have been by several batheings. The propriety and safety of these operations must be judged of by the nature and obstinacy of the obstructing matter. Whatever can be removed by bathing only, cannot want these more powerful applications. But where the ob-

obstructing matter is of a fixed kind, and the part affected cold and gummy, in tendinous contractions, then rubbing and pumping are by all means to be called in to our assistance, and they often do great service where milder means fail. They are both to be used with great caution, rubbing in the most gentle manner, with a soft hand only, and receiving not above fifty strokes of the pump at first, and encreasing the number slowly. After these operations all the Physician's sagacity is to be exerted in discovering when nature begins again to be overloaded with gouty matter, thrown into the blood, and then he must see that she has got quite clear of it, before he suffers any fresh quantity to be dissolved.

IT is impossible to say exactly how long the patient should continue in the Bath, because the particular circumstances of each bather can alone deter-

mine it. But it must appear from what has been said, that staying in too long must be an error of dangerous consequence. Yet this is a very common mistake ; for many people think, that the longer they stay in the water, the sooner they shall be cured, and act as wisely as the poor man did, who was ordered to take three purges in three weeks ; but, to save time, took them all together.

THIS error, I must confess, is sometimes purely the patient's misfortune, and not his fault. The great concourse of bathers is now very disproportional to the conveniences of our baths for their reception. The passages out of them are so few, that a poor weak hysterical creature, who cannot bear the Bath above ten minutes, is often kept in it above half an hour, and sometimes much longer, to the great peril of her life, at least to the irreparable damage of

of her health. This is so great a grievance, so much, and so justly complain'd of, that I don't doubt but the Legislature will judge it a matter highly worthy their consideration, and redress, by enabling the corporation to make the Baths more safe and useful. Our Magistrates are so sensible of this great inconvenience, that they are, at this time, adding some new slips (places to dress and undress in) to the King's Baths, for which they will deserve the thanks of all who shall hereafter want the use of that Bath.

WHEN the bather returns to his bed, which shouid not be made *too hot* as it usually is, let him drink a draught of warm Bath-Water Whey, which is made by putting *double* the quantity of the Water, fresh from the King's-Bath Pump, to one of Milk, just ready to boil. This Whey is a soft, pleasant, nourishing liquor; diluting without

heat ; gently diuretic, and cleansing ; and it may be drank with advantage by those who cannot bear the heat of the waters.

OUR patient, now in bed, should sweat but moderately, least by draining off too great a quantity of the fluids, the gouty particles (some portion of which we suppose to have been return'd into the blood by the last bathing) by being brought too near together, should unite and form Moleculæ, too large easily to pass the secretory strainers, through which they ought to be discharged.

IT is of late become very fashionable to go abroad on bathing days, even in inclement seasons. But tho' some are so hardy as not to feel, or not to own any immediate ill effects, from thus exposing themselves to the raw and chill air, while all their pores are open, and gaping to receive it, let me intreat all inva-

invalids, particularly the gouty ones we have been speaking of, not to be so impatient, under one day's confinement, as to run the risk of their lives by escaping from it.

THE danger of exposing the body to the cold air, immediately on its being rendered so susceptible of its worst influence by warm bathing, is too evident to want farther explanation. Examples of the bad consequences are numerous, and amongst them I might mention Governor *Fitz-Williams*, one of the most robust men I ever saw. This gentleman, after having been in the Bath, walked to *Lincomb*, on a cold day ; he returned with a pain in his side, a pleurisy ensued ; that was eased by copious bleedings ; but a peripneumony succeeded, which eluded all the means his Physicians could use for his relief, and he died by this imprudence.

HAVING now carried the patient through his first bathing, we must leave it to his Physician to find out when he shall be in a proper state to repeat it safely, or whether he ought to repeat it at all.

MANY persons come hither for relief, under such circumstances of ill health, as cannot properly admit the use of the Bath-Waters, in any shape.

THE *Bath* Physicians have a very difficult part to act with these people, who tell them, ‘ That they have come a long and painful journey ; their only hopes are in the Bath-Waters ; they have been assured by many that they are the only remedy in their case. May they not try a little, and with caution ? ’ Who can deny so moving a request of a poor miserable creature, who would almost die of despair if he was absolutely refused the trial ?

WHAT

WHAT shall the physician do in a case like this, when he really believes that the waters are unsafe for his patient, and yet the sick man, encouraged by his friends, perseveres in his importunity to make the tryal? I think he may suffer his modesty to overcome his reasonable reluctance, and to suspect his general experience may deceive him in this instance, especially as that experience has informed him that men daily receive benefit from applications very unpromising. And then, having previously repeated his doubts arising from his established opinion, he has nothing further to do but to obviate, all he can, the ill consequences he apprehends, by so circumstancing his patient's use of the Bath as may render its good effects most operative, and its ill effects least pernicious. If he proceeds with this humanity and caution, whatever the success shall be, he will have no reason

to blame himself, tho' perhaps he may not escape the censure of others.

It may be asked, how long a gouty patient should continue in a course of bathing ? that, I answer, circumstances, and those often unforeseen, must determine. Every day new accidents happen ; new indications present themselves. These make the time, necessary for receiving relief from bathing, very uncertain, and give a different length to every particular patient's use of this remedy. The gouty matter you see is to be dissolved very leisurely, and the bathing to be intermittd as often as the Physician finds it necessary, in order to give nature time to expel it out of the body when it has been dissolved. In general then, a person who expects to find much relief in gouty lamenesses, must submit to a long and tedious course of bathing, repeated at proper intervals, and for many seasons successively. So that he ought

ought not to attempt it, without a great stock of patience, and a firm resolution to persevere. To patience he must join temperance of every kind. He must not only abstain from all high food, and spirituous liquors, but he must restrain every inordinate passion ; and if he exerts his best endeavours, it is to be hoped, that on the issue, he will find that, together with the alleviation of his bodily disorders, he has freed himself from those worse diseases of the mind, whereby he will be better able to bear, if not to cure, what remains of the other.

HOWEVER terrible this distemper of the Gout may appear in my description, great numbers come hither every year in hopes to procure a fit of it. Severe must their sufferings be who can seek so bitter a remedy ! of these some have never had a fit, but with great reason suppose they have the seeds of the distemper in their constitution, and believe that they

never shall be well 'till the Gout can be made to appear in its genuine form. They have endeavoured to make it confess itself by pouring down strong *stomach* Wine, falsely so called, and have added as many hot spirituous Bitters as would have burnt up a Salamander, to no purpose. By this regimen, their stomach achs, head achs, vertigos, nau- seas, wandring pains, or whatever gave the first suspicions of a latent gout, being increased ; their appetite destroy'd ; their spirits dissipated, and their nerves shattered ; they come hither in full as- surance that these waters will immedi- ately drive the gouty matter into the extremities, and that then they shall be freed from all other torments.

OTHERS there are who have had many regular fits of the gout, and enjoyed good health in the intervals, while it continued its periodical visits. But for some years past the fits kept not their regular periods,

periods, and when they have appeared, they have not proceeded in the manner they used to do, while they proved critical. Hence hath arisen a variety of bad symptoms, which have before been mentioned, and for the relief of which they have most probably gone through a like course of gout-expelling medicines. Hither these likewise come in hopes of recalling their *old necessary evil* to their assistance.

UNDER both these circumstances Bath-Waters seldom fail of doing great service. They remove the ill effects of the former regimen, by cooling and moistening the over-dried and crisped fibres of the stomach, and by that means taking off their nauseae, and morning reachings; by degrees restoring the appetite, and rectifying the digestion, the good effects of which will soon be felt throughout the nervous system. By thus strengthening the whole machine,

nature will be enabled to throw out the gout, if there be any in the habit; and this is the only means, that I know of, by which it can safely, and critically, be expelled, and fixed in the extremities.

AFTER moderate evacuations, and a short course of drinking the waters, assisted with proper attenuating medicines, by which the viscosity of the juices may be dissolved, and the gouty moleculæ, which were entangled in them, may be set free and broke in pieces, they should bathe in the Cross-Bath twice a week. By keeping in the moderate uniform heat of this Bath, which is not much above the heat of human blood, for half an hour at a time, the circulation, thro' most of the series of vessels then open, will gradually be restored, and such numbers of canals, which were very lately shut up, will again be made per-
vious, that the bodily machine will have

have its full force of expulsion unresisted, and a regular fit will most probably be produced.

EVERY night of the day in which they do not bathe, they should put their legs into a pail of Bath-Water, moderately warm, for about ten minutes. I give this caution—that the water be but moderately warm, because the intention is to relax the solids, without rarefying the fluids too much. By this relaxation, the equilibrium of resistance in the whole body will be taken off, and nature will deposite what she wants to get rid of in the least resisting parts, which will apparently then be the feet.

AT this time, when the juices are duly attenuated, and the resistance of the extremities weakened, it will be right to brace the solids in general by light preparations of Bark and Steel.

IT may be thought perhaps that I have represented *proper bathing*, in *old gouty cases* and broken constitutions, as so nice an affair, and so full of hazard, that few, who believe what I have said, will venture upon it. It probably will be so; but I could not but represent the matter *truly*, as the intention of these papers is the safety of the sick, not the dishonest interest of the Physician.

OUGHT not a skilful mariner, who gives a chart of a very difficult navigation, to mark the rocks and quick-sands which he finds in the sea which he describes? If what I have said deters some from *bathing* at all, and every body from *improper bathing*, I hope it may encourage others (under all the given cautions) to use the only means we know of, by which they can obtain any considerable abatement of their sufferings. But, to carry on the allusion; it may be asked, whether it be not more

prudent

prudent for persons to stay safe in port, and content themselves without the riches of the *Indias*, than, by attempting the voyage, to run themselves into the hazards of a long and dangerous navigation ? was the being eased from sharp pains, and the recovery of the use of limbs, tho' even in a very moderate degree, of no more value than the expected rewards of such hazardous voyages ; I should frankly answer, that the *wise man* would stay at home. But as the prize sought after is of much more real worth than any thing which either of the *Indias* can afford, I think it as reasonable that gouty people should seek for relief from bathing, under the cautions here laid down, as I am sure it is imprudent for them to risque their lives by doing it in an *improper* manner.

WHETHER the head is to be dipt at the first entrance into the Bath, or not, is a question which has for some time puz-

puzzled the *bathers*, as it seems to have done their *advisers*. One should think that that way of reasoning which has established the practice of going head foremost into the Cold-Bath, should teach us that the contrary must be right in the use of the Hot-Bath. In both, the intention is to prevent the humours being too impetuously drove into the head. Cold contracts the vessels, drives their contents into distant parts of the body, and guards against too great an influx into the vessels so contracted. When a bather descends into the water, all the parts which are immersed undergo a great pressure from the weight of the circumambient fluid. The antagonist of this pressure is the rarefaction of the humours in the vessels by the heat of the bath. These two contranitent powers reciprocating with the alternate contractions, and dilations of the heart, produce an oscillatory motion which greatly contributes to attenuate, mix, and

and dissolve all the juices of the body. These too different powers conspire to throw too great a quantity of humours, and with too great a velocity, into the head. What can preserve it from the violence of this attack ? nothing that we know, but the keeping it constantly cool, that its vessels may be still in a contracted state, able to resist the too great influx from the parts of the body under Water. I hold it therefore to be most prudent for the generality of bathers, not to dip their heads at all, for I have known very teizing head-achs caused by relaxing the vessels of the head, and thereby admitting too great a flux of humours into them from the compressed parts. Those who find their heads to be disordered after bathing, notwithstanding this caution, should apply cloths dipped in cold water to their heads, and throats, just before they go into the Bath. In some cases, indeed, such as cutaneous ulcers, dry

scabs and scurfs, head-achs from the rigidity of the membranes, or stricture of the vessels, it is necessary to bathe the head. When it is so, it ought to be done in the slip, just before the bather rises out of the water.

I SHALL beg the reader's further patience, while I offer to his consideration a few hints concerning the seasons most proper for drinking the Bath-Waters, and bathing in them, and then conclude.

THE extremes of hot and cold weather are improper for physick of any kind, not demanded by necessity, which has neither law, nor rule. I think *April, May, and June*, the latter part of *August*, all *September*, and *October*, are preferable to any other months for drinking and bathing, tho' both may be done at other times, if the circumstances of the patient require immediate

ate relief. A temperate warm air keeps the pores open, and preserves a free passage, by which nature may constantly throw off the recretions of the juices, which are attenuated by the drinking, and by which she may likewise get rid of the dissolved gouty matter, which is brought into the circulation by bathing. In warm or temperate weather, the bathers are not so liable to colds and their ill consequences, the air having then but few of the particles in it which produce those disorders. But what is most likely to be agreeable to the bathers is, that in such weather they will not be obliged to that strict confinement on bathing days which is absolutely necessary in colder seasons. The benefits of a warm dry air, and serene sky, point out the unfitness of a contrary *Constitution* of weather for the use of our waters. They therefore who prefer the winter, when the pores are shut up; when colds, coughs, sore throats,

throats, peripneumonies, pleurisies, and all inflammatory diseases are epidemical, which can't but be exasperated by the heating qualities of these waters, seem to me to be more in the interest of the Doctors than of themselves. But as the state of the mind has a great influence on the constitution of the body, perhaps the pleasures of a *full* season may more than make amends for the inconveniences of a *cold* one.

FROM the foregoing pages I think we may draw the following conclusions.

THAT bathing in hot Baths is the most general solvent we know of all the humours of the body, whether natural, or morbid.

THAT the most general solvent is the most probable means by which obstructions of all kinds may be removed.

THAT

THAT the Gout arises from obstructions, formed in a particular series of vessels, thro' which its specific matter cannot pass any longer without the help of a fever.

THAT Gouts are of various kinds, and that their diversity depends upon the different sizes of the particles of that specific matter, the diameters of the vessels thro' which it should pass, the strength of the solids, and the height of the fever.

THAT the obstructing matter should be discharged out of the body as soon as possible after it has been dissolved, and brought again into the general circulation by warm bathing.

THAT 'till *that* be discharged, dissolving a fresh quantity, by repeated bathings, is very dangerous.

THAT

THAT previous evacuations are necessary to unload the habit, and clean out the first passages, amongst which vomits are often safe, and useful.

THAT attenuating, and aperitive medicines, are proper to render the humors more fluid, and to open a free way by which the dissolved moleculæ, which caused the obstructions, may be discharged with the secretions.

THAT bleedings, purgings, diaphoretics, and diuretics, are sometimes necessary to assist nature in the expulsion of the dissolved matter.

THAT too great a degree of heat in the Bath ; too long a stay in it ; too hot a bed after bathing ; a profuse sweat too long continued ; being exposed to cold air on bathing days ; or eating or drinking too plentifully of high seasoned meats, or inflaming liquors, during a course

course of bathing, are always improper, often dangerous, sometimes fatal.

THAT a course of bathing should be long, and by intervals, as the various effects it has upon the bather shall require.

THAT the head should in no case be dipt 'till the bather is rising out of the water.

THAT the temperate seasons of the year are most proper, safe, and useful, both for drinking, and bathing.

THAT there can be no stated rules laid down, because the peculiar circumstances of each patient, which are very various, must be our guide in practice.

AND from the whole I hope we learn, that by the prudent use of the hot Baths,

Baths, most chronical diseases, and gouty cases in particular, not in an inflamed state, may be relieved, and sometimes cured ; while persons in high health may be greatly hurt, by wantonly sporting with so powerful an *alterative* of the present state of the animal machine, either from sickness to health, or from health to sickness.

F I N I S.

IN the foregoing little Treatise, I have cautiously avoided using any Words not known to the mere English Reader. Yet I find it so difficult not to admit Terms of Art, when any physical or philosophical Subject is to be discoursed on, that I cannot but own the Complaint of those to be just, who say, that they meet with many Words in this Book which they do not understand; that they have not Dictionaries at Hand to which they may have Recourse for their Explanation; that by this Means the Sense often becomes obscure, sometimes unintelligible. To remove this Complaint I have hereunto annexed an Explanation of the Words to be met with in this Treatise, which are most likely not to be clearly understood by unlearned Readers. Nobody is capable of doing this rightly, but the Author of the Book, because he only knows for what precise Ideas these Words stood in his own Mind, when he put them down as Marks and Signs by which his Notions might be convey'd clearly to the Mind of the Reader. If you consult Dictionaries for the Meaning of such Words, you will find a general Sense given them, independent

dent of any particular Discourse in which they have been used ; and afterwards the very various Senses in which they have been used by different Authors. But neither of these can give you the precise Sense in which the Author you are reading has used them, and therefore you can never be absolutely certain of the true Sense of the Word you meet with, but from the Author himself, who, alone, has absolute Knowledge of his own Meaning.



An EXPLANATION of the Sense in which the Author uses the following Words in the foregoing ESSAY.

THE Lattin Motto, prefix'd to the Book, may be understood thus.:

*Tho' you despair to dance like Highland Dutchess,
Will you not guard against the want of Crutches?*

Regimen of Diet. Is the Rule by which a Person governs himself in Eating and Drinking. Page 2

Animal Oeconomy. The Nature, Situation, Powers, and Uses of the several Parts, whether solid or fluid, of the Body of an Animal. 4.

Canals. All hollow Vessels through which the Fluids of a Body pafs, and repafs, such as Arteries, Veins, &c. Ibid.

Tone of the Solids. There are certain Strings or Fibres in the Body which may be wound up or let loose, like the Strings of a musical Instrument. When they are become too stiff, they are said to be wound up too high. When they are not wound up high enough, they are supposed to be relaxed : When they

be

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be in either of these States, they are said to have an undue Tone, or Tension. When they are neither too stiff, or too loose, they have then their due and proper Tone.

Page 4

Obstructions. When the Particles of the Fluids cannot pass through the Canals, which they ought in a State of Health to pass through, they are obstructed in their Passages; and Diseases arising thence are produced by Obstructions.

5

Machine. The Body of an Animal is composed of divers Parts, as a Clock is, which are all adapted to their several Purposes, as the Spring and Wheels of that Machine are. The Nature, Power, and Contrivance of all these Parts, are the Mechanism of a Body, or Clock.

Ibid.

Theory, Is the Art of bringing many supposed Facts into one View; and, after having reasoned about them, asserting that such and such probable Consequences do result from the allowed Facts so compared; which Consequences may, or may not be true.

Ibid.

Practice, Here, is only concerned with bare Facts, without any Reasoning about them; tho' just Practice must always have Reason for its Guide.

6

Protrude, Or pushing the Fluids on.

Ibid.

Decreasing Series,— Thus, 4, 3, 2, 1. If the Capacity of the largest Vessels was equal to 4, the next to 3, and so on, we should say that this was a decreasing Series of Vessels.

Ibid.

The Sphere, Or Limits of the Circulation, are encreased when from only being continued through twenty, it is now carried on through thirty Canals, and so on to any greater Number.

Ibid.

Longitudinal Growth ceases when a Person has attained his full Highth or Tallness.

Ibid.

Phænomena, Are particular Appearances worthy our Notice and Attention.

Ibid.

Consolidated, Or united into one Body; as a great Number of the Particles of Flour are consolidated

by

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by Water into one Loaf; or many Threads, by being twisted, into one Rope.

Page 7

Impervious. Either having absolutely no Passage thro' them, or having that Passage entirely closed up or obstructed.

Ibid.

Stationary.—That is,—Really standing quite still, without going forward or backward, as the Sun appears to do on the longest Day in Summer; whereas, in Reality, its Place is as much altered (in Regard to our Earth) on that Day, as on any other in the whole Year. When the Sun appears to stand still, it is called the Solstice.

Ibid.

Fibres, Are the smallest Threads of an Animal Body, which seem to us to have no Fluids passing through them: Many of these Fibres, wove together, compose the Sides of the Vessels which have Liquors constantly passing thro' them.

Ibid.

Multa ferunt, &c.

8

New Joys attend each youthful coming Day,
Which, with declining Age, fade gradually away.

Specifick, Or peculiar Nature by which it differs from the Matter which causes other Diseases.

9

Acrid. Any Thing striking the Tongue with a rough Sharpness. Acids are sharp without Roughness.

10

Membranes, Are broad thin Parts of the Body, composed of a great Number of small Vessels wove together, as a Linnen Cloth is composed of many Threads.

Ibid.

Tendons, Are the small hard Ends of the Muscles, which are vulgarly called Chords.

Ibid.

Reabsorbed, Or sucked up again.

Ibid.

Attractions. Any Body is said to attract another, when it draws it to it as the Loadstone draws Iron.

11

Adhesions. Any Body is said to adhere to another Body, when it sticks fast to it, as melted Wax does to Paper.

Ibid.

Moleculæ, Are small Lumps composed of many smaller Parts, united by Attraction, or Adhesion.

Ibid.

Scarf-

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Scarf-skin, Is a very fine thin Skin which covers the Surface of most Parts of the Body, under which lies the true Skin, which is an hundred Times thicker than its Covering.

Page 11

A Liquor is said to be *depurated*, when its grosser Parts are separated from the finer, so that what was before foul and turbid, becomes clear and transparent. *Ibid.*

Valetudinary. Of a crazy Constitution, always ailing.

12

Premature. Ripening before its due Season.

Ibid.

Critical. A Distemper is said to be truly critical when the Matter which causes it is thrown out of the Body by some natural Evacuation, and Health follows such a Crisis.

13

Vertigos, Are such Affections of the Brain as cause Dizziness, or the Appearance of Objects turning round, which are at Rest.

Ibid.

Flatusses, Or windy Rumblings, and Distentions of the Stomach, or Bowels.

Ibid.

Mucus, Is a soft shiny Matter, which keeps the Parts moist, and defends them from the Injuries they would otherwise suffer from sharp Humours, or by rubbing against each other.

14.

Cretaceous, Or chalky Matter.

Ibid.

Muscular Motion, Is that by which all our Limbs are moved, and by which we perform every bodily Action.

Ibid.

The Vacuities between the Fibres of Muscles which are the Instruments of Motion, and their surrounding Membranes, are called *Interstices*.

Ibid.

Saline, Or abounding in Salts.

Ibid.

Gelatinous, Or of the Consistence of a stiff Jelly.

15

Sulphurous, Or of the Nature of Sulphur or Brimstone.

Ibid.

Saponaceous, Or of the Nature of Soap.

Ibid.

Rarefaction, Is the Effect of Heat on Fluids, by which they are made to take up more Room in the Vessels in which they are contained, and consequently to distend the Sides of these Vessels. Air is most subject to this Effect.

Ibid.

De-

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- Deobstruent*, Is whatever removes Obstructions. *Page 15*
Rigid. Stiff and hard. *Ibid.*
- Diameters of Vessels*, Are the Distances from a Point in one Side to its opposite Point in the other Side. *16*
- Capillary Vessels*, Are those which are the finest, and smallest Branches, many of whieh are much smaller than a Hair. *Ibid.*
- Chronical Distempers*, Are such as last a great while, as Gouts, Dropies, Consumptions, &c. *Ibid.*
- Tollere nodosam nescit Medicina podagrum* *18*
'Tis not in the Power of Physick to cure the knotted Gout.
- Stagnated*, Or standing still without due Circulation. *36*
- The Viscera*, Are the Lungs, Stomach, Liver, Spleen, Sweetbread, &c.
- Emaciated*. Grown very lean, almost Skeletons. *Ibid.* *42*
- Hectical*, Or falling into a slow hectic Fever, such as attends Consumptions. *Ibid.*
- Palpitations*, Or inordinate Beatings of the Heart. *43*
- Pleurisy*, Is a Fever attended with sharp Pains in the Side. *Ibid.*
- Peripneumony*, Is an Inflammation of the Lungs. *Ibid.*
- Apoplexy*, Is an Oppression of the Brain, causing deep Sleep, with loud Snoring. *Ibid.*
- Plethoraick*, or too full of Blood, and other Humours *47*
- Atenuated*, Or made thinner. *Ibid.*
- Accelerated*, Or quickened Circulation. *Ibid.*
- Oedematous Swellings*, Are such as be white, shining, and retain the Impressions of any hard Bodies, which make Pits in them. *49*
- Milliary Glands*, Are the small Glands of the Skin, of which there are many Thousands. *Ibid.*
- Recrements*, Are useless Parts of the Fluids, which are thrown out of the Body by Sweat and Perspiration. Sweat appears on the Skin in Moisture: Perspiration is almost an imperceptible Vapour which is continually flying off from every Part. *Ibid.*
- Concretions*, Are Moleculæ, or several of them sticking together. *Ibid.* *He-*

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- Hereditary Taint, Or a gouty Disposition from their Parents.* Page 51
- A Leucophlegmatic Habit, Is a full, pale, doughy Habit, and is a lower Degree of the Oedematous.* Ibid.
- Lymph, Is the watery Part of the Humours of the Body.* Ibid.
- Saturated with the Fumes, Or filled with the Smoak of Gums, such as Galbanum, Myrrh, Sagapenum, and of aromatic Plants, such as Calumus Aromaticus, Roots of Arum, Zedoary, or the whole Plants of Rosemary, Lavender, &c. all grossly powder'd, and mixed together.* 52
- Corrode them, Or eat into them, as Vitriol does into Cloth.* 53
- Penetrating, Or (from the Subtleness of their Parts) easily passing into the Limb.* Ibid.
- Stimulating, Or exciting the Fibres into Motion, by pricking them gently.* Ibid.
- Phlogistic; Or fiery Nature.* 54
- Electrical Fire, Is that Kind of Lightning which is produced by putting a Glass Globe into a quick Motion, letting it rub against a Leather Cushion, and applying an Iron Rod to its opposite Surface:—By this Operation Streams of Fire are constantly flying off at the End of the Iron Rod.* Ibid.
- Subsultory, Or skipping from Place to Place.* Ibid.
- Vapid, As dead Small-Beer, or Wine which has lost all its Spirit.* Ibid.
- Hypochondriacal, Or Vapourish.* Ibid.
- Atrophy, Or wasting of the Flesh, which is one Kind of Consumption.* 55
- Vasa inhalantia, Are the Vessels by which Liquids pass through the Surface into the Habit of the Body.* Ibid.
- Spasmodic, Or cramp-like Pains, from violent Drawings of the Parts out of their Places.* 64
- Emunctories, Or Outlets of the Body.* 70
- Nitre, Is a very cooling Salt.* 71
- Dieuretic, Or promoting the Discharge of Urine.* 76
- Pores, Are the Outlets thro' the Skin.* Ibid.
- Equilibrium, Or an equal Resistance of all the Parts.* 85
- Cir-*

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<i>Circumambient</i> , Or surrounding the Body, as Water does a Wash-Ball in a Bason.	88
<i>Contranitent</i> , Or striving one against the other.	<i>Ibid.</i>
<i>Reciprocating</i> , Or moving with, and being moved by, alternately.	<i>Ibid.</i>
<i>Oscillatory</i> . Moving forward and backward, like the Pendulum of a Clock.	<i>Ibid.</i>
<i>Velocity</i> , Or too quick a Current.	89
<i>Cutaneous Ulcers</i> , Are Ulcers of the Skin.	<i>Ibid.</i>
<i>Stricture</i> , Or preternatural Contraction of the Vessels.	90
<i>Epidemical</i> , Or very common among the People.	92
<i>Solvent</i> , Or Dissolver.	<i>Ibid.</i>
<i>Morbid</i> , Or diseased.	<i>Ibid.</i>
<i>Means</i> , Or Instrument.	<i>Ibid.</i>
<i>Specific Matter</i> , Or that particular Matter which is the Cause of the Gout.	93